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The Principles at Work

In High Performing Information Systems Organizations

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ABSTRACT

Although there is a great deal of discussion about high performing information systems (I/S) organizations, little is known about the characteristics and practices they use. A field study was conducted to learn what principles are applied in organizations widely acknowledged to be high performers. The sample of companies for this field study was chosen by a core team of 15 consultants, practitioners, and academic researchers. On-site, structured interviews were conducted with 105 executives and managers in both the functional areas and the I/S groups of the firms. The findings show that a common set of principles are applied in high performing I/S groups. At the same time, there are distinct differences between these leading companies. The results provide useful insights for practice and for future research.

Introduction

High performing firms stand out, admired by all. But, how do they become high performers? With respect to information technology (I/T), how do high performers differ from other companies? As obvious as these questions are, there is a scant amount of meaningful information about the distinguishing characteristics of these firms.

In order to gain insight into these questions, a field study involving a sample of firms perennially identified as high performers was conducted during 1995. A core team of 15 practitioners, consultants, and academic researchers created and carried out the study. Researchers interviewed 105 managers and information systems (I/S) professionals on-site in seven high performance organizations. While the results identified a set of principles followed by all the high performing companies, the investigation also revealed a highly visible and interesting set of *dissimilarities*. Among the questions studied during our investigation were the following: (1) Are high performing groups structured in similar ways? (2) Do the best firms share a common set of principles?

Methodology

To address the research questions, it was first necessary to identify a set of high performing I/S groups. For this study, an initial sample of 54 companies was identified by comparing the top-performing firms listed in *Computerworld* 100 for 1992-1994, *InformationWeek* 500 for 1992-1994, and *CIO* 100 for 1994. Those firms appearing in each list were included in the initial pool of companies. Also included were the firms recognized as Society for Information Management (SIM) Partners-In-Leadership Award winners for 1992-1994 and SIM Juried Paper Award companies for 1992-1994.

By selecting those companies listed in three or more of these sources, an initial study pool of 54 candidate companies was established. Seven firms were selected for on-site study: Aetna, Cigna, Home Depot, ITT Hartford, Merck and Company, Texas Instruments, and United Parcel Service.

A structured interview protocol created by the core team was followed during each site visit. Each on-site data collection effort (typically of two days duration) was conducted by a two-person team—a practitioner and either a consultant or an academic researcher—from the core group. Information was gathered from in-depth individual and group interviews with the following company managers and staff members:

Individual Interviews

Chief information officer

Mid-level I/S managers (2 or 3 per firm)

I/S human relations manager

Group Interviews

I/S line and staff members (4 to 6 in each firm)

Business unit staff members (4 to 6 in each firm)

Business-unit executives (2 or 3 per firm)

Interview notes, case descriptions of each company, and tape recorded transcripts formed the information resources from which the analysis and findings emerged.

Findings and Results

Two important findings emerging from the study provided insights into how the I/S groups were organized and the operating principles that guided both their day-to-day activities and long-term philosophies.

Structure of High Performing Groups

Does the way the I/S groups are structured lead to high performance? The research team was unable to find a connection between the structure of the groups and their high performance capabilities. On the contrary, the seven firms employed four entirely different organizational forms:

1. Radical decentralization
2. Centralization
3. Federalist
4. Virtual technology network

These findings are summarized in Table 1.

Seven Business Principles

Table 1

Organization Structures of High Performing I/S Groups

FORM	CHARACTERISTICS
Radical decentralization	<ul style="list-style-type: none">• All I/S activities (as well as hardware, people, data) are distributed to the basic operational unit-beyond the business unit to each site directly serving customers

	<ul style="list-style-type: none"> • I/S skills not shared across sites • Corporate standards may exist
Centralization	<ul style="list-style-type: none"> • Wholly centralized I/S; wholly centralized corporate management • Separate, but unequal; existing in separate locations; no career track from I/S to corporate management • Shared understanding of business mission and strategy
Federalist	<ul style="list-style-type: none"> • Leverages both centralized and decentralized worlds • Centralized architecture, standard, cross-business unit development projects • Decentralized ownership of development, projects, control, staffing to business units
Virtual Technology Network	<ul style="list-style-type: none"> • Identifies key skill sets within an entire organization which become an inventory of "competency centers" • As needed, assembles and deploys "strike force" teams from competency centers to business units • Strike force composition is dynamic

Seven essential principles emerged from the study. Since the more than 100 interviewees spanned diverse organizational structures and dramatically different types of business, we believe these principles can be widely applied.

1. Create and Communicate the Vision

Each high performing organization both demonstrated and lived by the principle that their capabilities must support the vision of the firm. In itself, this is not a new finding. In fact, knowing and supporting the business vision is almost a truism for the I/S community. However, our investigation revealed an additional, but seldom discussed element of this principle that is even more critical: The I/S group must *know* the needs of the business units it supports and *it must be seen* as knowing the business units needs. Hence there are three aspects to this principle: Support the business; know the business (essential to providing meaningful support); and be perceived as knowing the business.

2. Match I/S Capabilities with Business Needs

In the high performance I/S firms, support of the vision is only possible when the capabilities of the I/S group meet the business needs. Such support (real and perceived) occurs in two ways: (1) direct support of the strategic and operating needs of the enterprise, and (2) direct support of those who purchase and use the organization's products and services. In other words, I/S must meet the needs of both internal and external customers.

3. Support Ongoing Structuring of Organizations

High performing organizations do not seek to identify and then create the right organization structure. Rather, they view structure as a process. It is ongoing, as leaders continually adapt the organization of people and resources to meet the changing business needs. The structuring of the I/S organization thus depends on the ability of its leaders to recognize the shifts in the environment of the firm, the changing

demands placed on I/T by the organization, and the emerging challenges appearing on the horizon. And it depends on the willingness and ability of the I/S leaders to facilitate the structuring process.

4. Be Able to Change Change

The importance of change is so well-recognized that its mere mention is almost trite. Our investigation not only documented its importance, but revealed something much more significant. Change itself is changing. It is faster and more frequent than ever before, with no end in sight. Hence, change is not an event but rather, like structuring, a process.

The high performing I/S organizations we studied not only recognize the manner in which change has changed, but they embed it in their culture. It is in the thinking and the talk of leaders and staff: "If you can't change, you don't belong here." "I look for people who have experienced rapid change. If they haven't, they probably won't fit here." For these firms, normality is easy to grasp: Ongoing evolution with periods where change is not occurring

5. Actively and Dynamically Manage Human Resources

In the midst of installed bases that included some of the most sophisticated, state-of-the art technology used in practice, it was evident that these high performing firms viewed *people*, not technology, as a critical factor in their success. The operationalization of this belief contains the real messages comprising this principle: (1) A firm's human resources must be managed for dynamic evolution (as with organization structure) and (2) in the midst of ongoing restructuring, there is a greater burden on individuals to maintain their professional and organization capabilities.

There is an element of brutal honesty in this principle. The managers indicated they can no longer function as benevolent parents or offer career-long employment contracts. Rather, they provide employees with more information and insight, opinions, and opportunities than ever before. Those who do take advantage of these offerings and grow their capabilities do well. Those who do not often leave the company.

6. Match Employee Skills to Changing Business Needs

The importance of managing dynamic skills evolution is augmented by another principle calling for the matching of current skills with current needs. These are not contradictory principles, but rather a reflection of business-driven I/S requirements.

Legacy systems provide the most convincing embodiment of this principle. Even in the midst of a continual push to move the I/S organization into the next generation of technology, the firm must still rely on its installed base and its legacy systems. Likewise, employees with skills to manage and maintain these resources must be retained as well. Hence, it was evident in this field study that I/S managers are willing to pay premium salaries and provide other perks in order to keep individuals with those skills in place.

7. Match New Information Technologies To Business Needs

Although it is widely acknowledged that I/T should be deployed to match business needs, there are varying ways in which this may be done. This research revealed overwhelmingly that managers and staff members know I/T can enable business opportunities. The business units *expect* the I/S group to do so, but without pushing I/T for its own sake (i.e., an enabling, but not driving, role). Knowing the business, the over-riding principle, becomes all the more important in this context.

Summary

High performing I/S organizations do more than just utilize information technology wisely.

They subscribe to a set of principles that leverages their capabilities in a manner that fits the needs of their business partners within and outside of the company. Above, all, change is a way of life for the high performers.